# Conceptualizing Family Engagement in Home Visiting: Exploring the Use of Existing Data to Promote Collaborative Research

## BACKGROUND

One of HARC's objectives is to work with organizations to explore and expand their capacity for collaborative research using and sharing existing data to conduct precision research and evaluation that addresses emerging and enduring issues in the field. To support this objective, HARC is developing a Precision Paradigm (see sidebar) to build a common framework and language for designing research studies. Many home visiting models, states, and other health and social services organizations maintain management information systems (MIS) that contain caregiver, child, and family data about home visiting service delivery and case management. Using existing MIS data to conduct precision research studies can reduce costs and burden associated with new data collection, yet also has some challenges. This brief describes the Developing Strategies to Facilitate Cross-Model Collaboration and Data Sharing (MODS) project, which aimed to explore and advance home visiting models' interest, readiness, and capacity to engage in collaborative precision research using existing MIS data.

> **Precision Paradigm**
>
> The Precision Paradigm guides home visiting research and evaluation that helps us understand *what* works *for whom, in which contexts, why, and how*.

## PROJECT OVERVIEW

A group of HARC staff (the "HARC team") recently completed the two-year MODS project to establish and support a Community of Practice (CoP) of 10 national, evidence-based home visiting models looking to explore and advance their readiness to engage in collaborative precision research using existing MIS data. Through MODS, the HARC team and the CoP explored the models' capacity to engage in collaborative research. CoP members identified high-priority research questions across three broad areas: family engagement in home visiting services, home visitor retention, and home visiting outcomes.

Together, the CoP and HARC team decided to focus on family engagement in home visiting services as a "test case" for designing a study using data from participating models' MIS. Family engagement is a key component of the Precision Paradigm and has remained a national research priority since HARC's inception in 2012.[1,2] We conceptualized family engagement in home visiting and then explored the alignment of these concepts with available data.

# IDENTIFYING FAMILY ENGAGEMENT CONCEPTS

The HARC team used complementary iterative methods to 1) identify key family engagement concepts and 2) assess alignment between identified concepts and metadata[a] from models' MIS. We first conducted a rapid review of existing review articles, theoretical articles, and conceptual articles on family engagement in home visiting and related fields. The HARC team then conducted interviews with representatives from 10 home visiting models to elicit their perspectives on key concepts related to family engagement. During the second year of the project, we held five CoP meetings to discuss emerging themes and identify potentially relevant data fields in the MIS. See Appendix A for a more detailed overview of the approach.

The HARC team identified 11 engagement concepts by grouping together similar or overlapping concepts identified through the rapid review into meaningful categories. Six concepts relate to participants' thoughts and feelings (i.e., internal states) regarding home visiting services, referred to as internal engagement. Five are expressed through participant behaviors and actions (i.e., external states) related to home visiting and its specific interventions, referred to as external engagement.

Interviews with home visiting model representatives supported the core concepts of family engagement. Models shared that families' perceptions of their home visitors were critical to internal engagement. They described a harmonious relationship as one that includes partnership, mutual trust and respect, open and honest communication, cultural competence, and healthy boundaries. Interviewees also talked about the importance of families' satisfaction with and commitment to the program. Several model representatives mentioned the importance of intervention acceptability, relevance, and "goodness of fit," including participants' need for clarity of purpose and "buy-in" to participate in home visiting. They noted that families' readiness for change and beliefs that home visiting could help them reach their goals were critical to achieving desired outcomes.

Home visiting model representatives also described external engagement concepts. They discussed a variety of behaviors, including families completing visits according to the intended schedule, participating in activities during visits, following through on recommended activities between visits, and sharing information about the program with others in their community.

## Engagement Concepts

**Internal engagement** includes six concepts related to families':

1. *Perceptions of home visitors* such as whether they are trustworthy, honest, respectful, and responsive, and relationships with home visitors are reciprocal and well-aligned in terms of goals, roles, and style
2. Perceptions of home visiting *acceptability, relevance,* and "goodness of *fit*" with families' expectations and preferences
3. *Perceptions of home visiting effectiveness* for achieving meaningful goals
4. *Interest, motivation, and commitment* to participate in home visiting
5. *Readiness for change*
6. *Satisfaction* with home visiting providers and services

**External engagement** includes five concepts related to families':

1. Initial *enrollment* in home visiting
2. Home visit *occurrence*
3. Program *retention*, that is, continued enrollment in home visiting or duration of enrollment
4. *Participation* in activities *during home visits* including collaborating with home visitors, sharing opinions, asking questions, and participating in the curriculum
5. *Participation* in suggested activities *between home visits* including follow-through on planned activities and application of skills

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[a] Metadata are defined as data about data. The metadata help determine which data elements are needed from each home visiting model to conduct a collaborative study.

# ALIGNING FAMILY ENGAGEMENT CONCEPTS WITH MIS DATA

The HARC team collaborated with seven models to acquire, interpret, extract, and validate metadata from their MIS into a template data table. Once each of the models approved their extracted data, the team looked for commonalties in how each model collects data on family engagement across the seven models' MIS to determine the potential for a collaborative study on family engagement. Table 1 displays the 11 family engagement concepts, the number of models with MIS data for each concept, and notes on whether data are comparable across models (i.e., the items and response options are the same or similar) and could be merged to conduct a collaborative study.

Each engagement concept was represented in at least one model's MIS; 10 concepts were represented in two or more models' MIS. Home visiting models' MIS were more likely to contain data on external engagement than internal engagement. Home visiting models often measured individual family engagement concepts differently. Only five of the engagement concepts were represented in multiple models' MIS with comparable data that could be merged for a cross-model collaborative study. Four of these five concepts related to external engagement.

**Table 1. Family Engagement Concepts Measured in Home Visiting Models' Management Information Systems (MIS; *n* = 7)**

| Engagement Concepts | Number of HV Models with Data to Measure Concept | Number of HV Models with Comparable Data for Collaborative Study | Details on Comparable Data |
|---|---|---|---|
| **Internal Engagement** | | | |
| Perceptions of home visitors | 1 | 0 | Only one model has data |
| Perceptions of home visiting acceptability, relevance, and fit | 3 | 0 | No model data are comparable |
| Perceptions of home visiting effectiveness | 4 | 0 | No model data are comparable |
| Interest, motivation, and commitment | 2 | 0 | No model data are comparable |
| Readiness for change | 3 | 0 | No model data are comparable |
| Satisfaction with home visiting providers and services | 4 | 3 | 3 models have comparable data on overall program satisfaction |
| **External Engagement** | | | |
| Enrollment | 6 | 6 | 6 models have comparable data on enrollment date or date of first home visit to indicate start of services |
| Home visit occurrence | 7 | 5 | 5 models have comparable data on home visit dates to calculate visit frequency |
| Retention | 6 | 5 | 5 models have comparable data on enrollment and exit dates to calculate retention or duration of enrollment |
| Participation during home visits | 3 | 0 | None of the model data are comparable (i.e., data include whether activities were delivered, but not whether families participated in the activities) |
| Participation between home visits | 4 | 4 | 4 models have comparable data on parent and child activities<br>4 models have comparable data on behaviors practiced between visits |

# IMPLICATIONS

The MODS project aimed to explore and advance home visiting models' interest and readiness to engage in collaborative precision research using existing MIS data. Home visiting models collaborated on high-priority research questions, provided metadata from their national MIS, helped to conceptualize family engagement in home visiting, and offered examples of how the family engagement concepts are expressed in the field.

From our review of the sample of MIS we had access to in this project, home visiting models typically collect behavioral indicators of engagement that can be aligned. Given these behavioral indicators are already present in most models' regular data collection, it may be feasible to modify existing fields for better cross-model alignment. Additionally, it is important to understand which internal engagement concepts might provide early signals of disengagement and to discuss whether and how they should be monitored and stored in the MIS. For example, MIS rarely captured information related to families' perceptions of their home visitors and acceptability, relevance, and fit of services, despite the importance of these concepts as reported by home visiting model representatives and in existing home visiting studies.[3-6] This may be due to challenges collecting these data through MIS versus a caregiver-reported survey or other data collection mechanism such as text messaging apps, that do not involve home visitors directly in data collection and where ratings might be captured in systems other than MIS. Furthermore, since most models have not collected these data, there is an opportunity to identify measures that could be implemented and administered across models through MIS or other means.

To facilitate measurement of families' perceptions of these important internal engagement concepts, next steps could include conducting focus groups with families, identifying existing measures and examining their reliability and validity with different home visiting populations, and piloting selected measures in collaboration with home visiting models including trialing different modes of administration. It will be important to examine how and when these data should be collected and how they could be used. These activities could help to move towards consensus across awardees and home visiting models regarding which measures are most feasible and useful to collect within the MIS or elsewhere to supplement the behavioral indicators currently available in MIS.

The methods and findings from this project may have utility beyond family engagement for other elements of the Precision Paradigm. HARC continues to explore opportunities for collaborative studies with states and home visiting models that examine the adequacy of MIS data for research.

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# APPENDIX A: APPROACH

## Conceptualizing Family Engagement

The HARC team conducted a rapid review of existing review articles, theoretical articles, and conceptual articles to explore how family engagement is conceptualized and defined in home visiting and in fields such as mental health services, social work, child welfare, and health care. A rapid review is an appropriate choice for researchers seeking to summarize available evidence quickly.[7,8]

*Searching and Screening.* The team conducted keyword searching of titles to identify relevant articles using PsycINFO, PubMed, Web of Science, Google Scholar, and the National Home Visiting Resource Center reference catalog.

After removing duplicate records, the team conducted a three-step screening process. First, we independently screened titles for relevance. Second, we screened abstracts of remaining records against the following criteria: focus on engagement in services and organized settings; reviews of definitions or dimensions of engagement; conceptual models of engagement; reviews of predictors of engagement; reviews of engagement techniques; and reviews of measures of engagement. Third, we conducted a full text screening of remaining records against the inclusion criteria to determine relevance for the review and met to discuss and resolve any disagreements. Reviewers also scanned the reference lists of the full text articles and identified seven additional articles that met the inclusion criteria. This process resulted in 41 articles for review. Thirty-four of the 41 articles informed the conceptualization of engagement.[9-42] The remaining seven articles focused on predictors of engagement or techniques to promote engagement and thus did not contribute to the conceptualization.

*Summarizing and Synthesizing.* The team created an Excel database to document and summarize information extracted from the articles that met the inclusion criteria. Two reviewers independently extracted data from each article on definitions and concepts of engagement, then convened to identify and resolve discrepancies in their coding. Two reviewers independently reviewed the final abstracted summaries and extracted definitions and concepts of engagement. The reviewers grouped together related concepts and devised labels and descriptions for each concept.

*Validating Engagement Concepts with Home Visiting Model Representatives.* Concurrent with the rapid review, we conducted semi-structured individual and group interviews with representatives (range: 1–6 participants per interview) from each of the 10 home visiting models participating in the CoP to gather their perspectives on family engagement. The discussion guide included open-ended questions on home visiting models' descriptions and perceptions of dimensions of engagement, signs of engagement, measurement of engagement, and variability in engagement across families. Home visiting model representatives who participated in the interviews held various roles within the model's organization, including training, research, and management; some had been home visitors in the past.

The team created summary notes for each interview and applied deductive thematic analysis to the interview notes. We used the engagement concepts identified in the rapid review to code the interviews to examine alignment between engagement concepts from the rapid review and the interviews. We then convened CoP members to share findings and solicit their feedback on the validity and completeness of the emerging definition of engagement and its concepts.

## Assessing Alignment between Family Engagement Concepts and MIS Metadata

The HARC team extracted, merged, and assessed metadata for seven of the 10 home visiting models participating in the CoP that had a MIS to explore the extent to which MIS contain data to measure family engagement and thus the potential for a collaborative study.

*Extracting and Merging MIS Metadata.* Models provided MIS documentation, including forms, data dictionaries, and codebooks. We extracted metadata into a template data table that listed each MIS item or question and grouped them in broad categories comparable to those in the Precision Paradigm. Categories included the intervention (e.g., methods of delivery, which services were delivered), usage (e.g., engagement with material or services), and context (e.g., demographics, health, developmental characteristics). Each row in the sheet was tagged with a category. Each of the home visiting models reviewed its metadata, which the team updated in response to their feedback. The team then combined the content from each home visiting model into a single data table with a common structure that included the home visiting model name, form name, form question, response options, variable label, variable format, and Precision Paradigm category.

*Assessing Alignment of Concepts and Data.* The HARC team examined MIS fields coded as part of the usage category to understand the presence and diversity of engagement concepts captured in participating models' MIS. The team reviewed the data table to assess the extent to which MIS included data related to the family engagement concepts identified in the literature. We then examined models' MIS to determine which models collected comparable items and response options to measure any of the engagement concepts that could be merged for a cross-model study.